CLAIMS

1. A method of producing a heating element that is comprised essentially of molybdenum silicide type and alloys of this basic material, c h a r a c t e r i s e d by producing a material that contains   substantially $Mo(Si_{1-x}Al_x)_2$ and Al_2O_3 by mixing a molybdenum aluminium silicide $Mo(Si_{1-y}Al_y)_2$ with SiO_2, wherein the SiO_2 is at least 98% pure.

2. A method according to Claim 1, c h a r a c t e r i s e d in that the SiO_2 is present in silicates, such as mullite and sillimanite, which do not effect the symmetry of the crystal lattice of molybdenum silicide.

3. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.4 – 0.6.

4. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.45 – 0.55.

5. A method according to Claim 1, 2, 3 or 4, c h a r a c - t e r i s e d by substituting molybdenum partly with Re or W in the material $Mo(Si_{1-x}Al_x)_2$.

6. A electrical heating element that is comprised substantially of the molybdenum silicide type and alloys of this basic material, c h a r a c t e r i s e d in that said element is comprised chiefly of the materials $Mo(Si_{1-x}Al_x)_2$ and Al_2O_3; wherein SiO_2 having a purity of at least 98% is added during the production process.

7. A heating element according to Claim 5, c h a r a c - t e r i s e d in that x lies in the range of 0.4 – 0.6.

AMENDED SHEET

8. A heating element according to Claim 7, c h a r a c -
t e r i s e d in that x is caused to lie in the range of 0.45
- 0.55.

9. A heating element according to Claim 5, 6, 7 or 8,
c h a r a c t e r i s e d in that molybdenum in the material
$Mo(Si_{1-x}Al_x)_2$ is replaced partially with Re or W.